D.C. PM MOTOR AND GENERATOR WITH A STATOR CORE ASSEMBLY FORMED OF PRESSURE SHAPED PROCESSED FERROMAGNETIC PARTICLES

ABSTRACT OF THE DISCLOSURE

A d.c. PM motor and corresponding generator having a stator core assembly which is formed of a molded or pressure shaped processed ferromagnetic particulate material. The low permeability characteristic of this material is accommodated for by a stator shape which optimizes the efficiency of the coupling of the PM field of a rotor into the stator structure. Efficiency for coupling the applied field into the stator core structure also is enhanced through the utilization of transitions in levels between the induction region of each core component and the field winding support region. A method is described for assembling the stator core assemblies using discrete core component pieces in conjunction with back iron linking components or pieces.